Redundant

Vent Gas Safety Solenoid valves



Buschjost Magnetventile GmbH & Co. KG , 32602 Vlotho, Germany T. +49 (0) 5731 - 79 82 00 eMail: service@buschjostventile.de

## Vent gas safety solenoid valves in redundant arrangement

In case of malfunctions of the process valves unexpected dangerous problems occur and you therefore have to expect increased higher risks, the valves have to be designed in a redundant arrangement.



# 2 main valves connected in series open and close simultaneously.

An additional electrical position control records the valve switching position:

- Valve(s) open or valve(s) closed.
- Any possible leakage at the 1st main valve is safely overcome by an optional central relieve valve which is normally open (NO).

## Our customers in the gas facilities and environmental technology field

Unprocessed biogas delivered by gas suppliers is stored in underground salt caverns (depth up to 1500 m). To make the biogas ready for use it is taken out of the storage site, preheated in a gas processing plant, its pressure is reduced, and finally it is dried by means of glycol (dehumidified).

### **Solenoid valves for Vent Gas**

When biogas is being processed vent gas are



generated. Vent gas are by-products based on hydrocarbon in a gaseous phase, being transformed to the condensate phase when being cooled off.

The generated vent gas mixture is generally burned.

A valve combination in redundant arrangement is used for isolation:

2 main valves 24-NC series DN65

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- 1 release valve 48-NO series G1/2 to drain off the leakage gas
- Intermediate flange with pipe extension for leakage rate valve, suitable for isolation.

The vent gas input pressure is 500 mbar at temperatures between +140 °C and +160 °C.

quent formation of deposits on the valve seat can cause permanent leakage.

To counteract this in the best possible way valves from special materials are chosen. Furthermore the operator has to make sure that the isolating combination is continuously heated to ensure good isolation.





#### **Difficulty Problematic**

When the vent gas is cooled, it can be streak out and condensate and in the end a subse-

Gasaufbereitung EPE

